# COMPARISON OF DEMOGRAPHIC AND SELECTED INTERMEDIATE OUTCOME MEASURES FOR HEALTH MAINTENANCE ORGANIZATION (HMO) AND FEE-FOR SERVICE (FFS) ADULT IN-CENTER HEMODIALYSIS PATENTS


## Supplemental Report #1

1998 ESRD Core Indicators Project
Opportunities to improve care for adult End-Stage Renal Disease patients

*The Health Care Financing Administration* *February 1999*

**INTRODUCTION**

The purpose of the Health Care Financing Administration's (HCFA's) End-Stage Renal Disease (ESRD) Core Indicators Project is to assist providers of ESRD services in assessing and identifying opportunities to improve the care provided to adult (aged$18 years) in-center hemodialysis (HD) and peritoneal dialysis patients.

This supplemental report describes the demographic characteristics of adult in-center HD patients enrolled in a Medicare Health Maintenance Organization (HMO) compared to adult in-center HD patients with fee-for-service (FFS) coverage. Currently, ESRD Medicare beneficiaries are precluded from enrolling in an HMO, but Medicare beneficiaries already enrolled in an HMO who subsequently develop ESRD may remain in the HMO. Consequently, due to the increase in the overall Medicare enrollment in HMOs, there has also been an increase in the prevalence of ESRD Medicare beneficiaries in HMOs. This report also describes several intermediate outcome measures and some dialysis adequacy and anemia management process measures experienced by these two groups of patients.

**METHODS**

***The Samples***

*The HMO Sample*

A national random sample of 500 in-center HD patients who were 18 years or older as of September 30, 1997, known to be dialyzing in a Network area, and alive and identified as enrolled in an HMO on December 31, 1997 was selected. As of December 31, 1997, there were 6612 ESRD Medicare beneficiaries enrolled in an HMO known by the Networks to be dialyzing in a Network area.

*The FFS Sample*

In February, 1998, the eighteen Network organizations provided to HCFA a listing of all ESRD patients in their geographic area. All in-center HD patients who were 18 years or older as of September 30, 1997 and alive on December 31, 1997 were identified and eligible for inclusion in the sample. From this universe of patients, a random sample of patients, stratified by Network, was selected. Patients selected for inclusion in this sample who were also enrolled in an HMO were subsequently deleted from the dataset for this analysis.

*Data Collection*

In June 1998, a one-page HD data collection form was sent to ESRD facilities providing care to selected patients in the HMO and fee-for-service samples. Clinical information in the selected patients' medical records was abstracted for each patient in the samples who was receiving in-center HD during the months of October, November, and December, 1997. Patient characteristic information collected included: gender, age, race, Hispanic ethnicity, years on dialysis, and primary cause of ESRD. Clinical information used to assess the quality of care provided to these patients included the following: patient height, pre- and post-dialysis blood urea nitrogen (BUN) levels and pre- and post-dialysis weights (in kg) to calculate the urea reduction ratio (URR) and Kt/V values, dialysis session length, dialyzer codes (to determine dialyzer KUf), hematocrit values, hemoglobin values, prescribed weekly epoetin alfa doses (units/kg) at the time the hematocrit was drawn, transferrin saturations, ferritin concentrations, iron prescription practices, serum albumin values and the laboratory method used to determine the serum albumin values (bromcresol green [BCG] or bromcresol purple [BCP]).

Completed forms were returned to the appropriate Network office where data were reviewed and entered into a computerized database (Epi Info, v. 6.04).[1] The data were forwarded to HCFA for aggregation and analysis.

*Data Analysis*

Kt/V values were calculated according to the Daugirdis II formula.[2] For this report, percentage, mean (±standard deviation [SD]), and median values were derived from available reported data over the three month study period. Associations of demographic and clinical data with HMO status were tested by Chi square, hierarchical ANOVA, and two-tailed student's t-test analyses, with a p-value <0.05 considered to be significant. For this analysis, racial categories were restricted to Caucasian and African-American groups only, due to the low numbers in the other racial groups. Separate age, gender, and race adjustments were made on the HMO data to reflect the age, gender, and race distribution, respectively in the FFS sample. Logistic regression analysis, stratified by age group (under 65 years and 65+ years), was conducted on the following intermediate outcome measures: mean URR $65%, mean Kt/V $1.2, mean hematocrit <28%, mean hematocrit $33%, mean hematocrit 33%-36%, and mean serum albumin $3.5/3.2 gm/dL (BCG/BCP laboratory methods, respectively). The following variables were entered into each logistic regression model in a forward stepwise manner: gender, age (years), race (African-American and Caucasian only), Hispanic (Yes, No), years on dialysis as a categorical variable (<0.5, 0.5-1, 1-2, and 2+ years, with 2+ years the referent category), mean pre-dialysis weight in kg, diabetes mellitus listed as a primary cause of ESRD (Yes, No), HMO status (Yes, No), and Network as a categorical variable. The final models displayed in this report were obtained retaining only those variables with a statistically significant contribution to the model when controlling for the other demographic and patient characteristic variables listed above (except Network).

The data analyses were conducted utilizing Epi Info, v. 6.04 and SPSS for Windows, v. 8.0.[3]

**RESULTS**

Ninety-three percent (7092/7658) of the data collection forms from the FFS sample were returned and acceptable for analysis. There were 278 HMO patients in this randomly drawn sample, who were deleted from the FFS sample for subsequent analysis, leaving a total of 6814 patients in the FFS sample. Ninety-six percent (482/500) of the data collection forms from the HMO sample were returned and acceptable for analysis.

The HMO sample was fundamentally different from the FFS sample in regard to patient demographic characteristics. The median ages of the HMO and FFS samples were 71 and 62 years, respectively; the mean (±SD) ages of the HMO and FFS samples were 70 (±13) and 60 (±16) years, respectively ($p<0.001$). (TABLE 1) The HMO sample had a significantly larger percentage of males compared to the FFS sample (59% vs. 53%, respectively, $p<0.01$). The HMO sample also had a significantly larger percentage of Caucasian patients (68% vs. 51%), and Hispanic patients (20% vs. 12%), and a significantly smaller percentage of African-American patients, (22% vs. 37%) compared to the FFS sample ($p<0.001$). There was a significantly larger percentage of patients with diabetes mellitus as a primary cause of ESRD in the HMO sample compared to the FFS sample (47% vs. 39%, respectively, $p<0.01$), and a significantly smaller percentage of patients in the HMO sample with hypertension as a primary cause of ESRD compared to the FFS sample (22% vs. 27%, respectively, $p<0.01$).

Table 2 lists the mean (±SD) and median values for intermediate outcome measures, as well as the number and percentages of patients with certain intermediate outcomes for patients in the FFS sample and for patients in the HMO sample (unadjusted).

Mean (±SD) values for continuous intermediate outcome variables (URR, Kt/V, hematocrit, and serum albumin) by the categorical years on dialysis variable and HMO status are listed in TABLE 3. Patients who have been dialyzing six months or less experienced lower mean values for all intermediate outcome variables examined, regardless of HMO status.

The final logistic regression models, stratified by age group (under 65 years and 65+ years), are shown in Tables 4A-F for mean URR $65%, mean Kt/V $1.2, mean hematocrit <28%, mean hematocrit $33%, mean hematocrit 33%-36%, and serum albumin $3.5/3.2 gm/dL (BCG/BCP laboratory methods, respectively) as the intermediate outcome variable of interest. HMO status did not remain in the model as a significant predictor of any intermediate outcome, whether or not Network was included in the model.

**KEY OBSERVATIONS**

Among adult (aged$18 years) in-center hemodialysis patients during the last quarter of 1997:

, The HMO and FFS samples were fundamentally different with regard to patient demographic characteristics. The HMO sample was significantly older than the FFS sample (median ages 71 and 62 years, respectively). The HMO sample had a significantly larger percentage of Caucasian and Hispanic patients, and a significantly smaller percentage of African-American patients compared to the FFS sample.

, The HMO sample had a significantly larger percentage of patients with diabetes mellitus and a significantly smaller percentage of patients with hypertension as primary causes of ESRD compared to the FFS sample.

, After adjusting for patient characteristics, HMO patients experienced similar intermediate outcomes compared to those with FFS coverage. HMO status did not predict either better or poorer intermediate outcomes among those examined (URR, Kt/V, hematocrit, and serum albumin).

, A significantly greater percentage of HMO patients received epoetin alfa intravenously and a significantly lower percentage received this medication subcutaneously compared to FFS patients. Iron prescription practices were similar for the two groups.

, A significantly greater percentage of HMO patients received dialysis using dialyzers with a KUf $20 mL/mm Hg/hr and had significantly shorter dialysis session lengths compared to FFS patients.

**REFERENCES**

1. Dean JA, Burton AH, Coulombier D et al. Epi Info, Version 6.04a: a word processing, database, and statistics program for epidemiology on microcomputers. Centers for Disease Control and Prevention. Atlanta, GA 1996.

2. Daugirdis JT. Second generation logarithmic estimates of single-pool variable volume Kt/V: an analysis of error. *J Am Soc Nephrol* 1993;4:1205-13.

3. Norusis MJ. SPSS for Windows Advanced Statistics. Release 8.0. Chicago, IL. USA. 1997.

**TABLE 1:** SELECTED CHARACTERISTICS OF PATIENTS IN THE SAMPLES

| **Patient Characteristic** | **FFS**<br>n (%) | **HMO**<br>n (%) |
|---|---|---|
| **TOTAL** | **6814 (100)** | **482 (100)** |
| Gender (p<0.01) | | |
| Males | 3591 (53) | 284 (59) |
| Females | 3213 (47) | 197 (41) |
| Age (years) (p<0.001) | | |
| Mean (±SD) | 59.6 (±16.4) | 69.6 (±13.4) |
| Median | 62 | 71 |
| Age group (years) (p<0.001) | | |
| 18-44 | 1178 (17) | 21 ( 4) |
| 45-64 | 2519 (37) | 97 (20) |
| 65+ | 3052 (45) | 364 (76) |
| Race/Ethnicity (p<0.001) | | |
| Caucasian | 3455 (51) | 329 (68) |
| African-American | 2534 (37) | 107 (22) |
| American Indian/Alaska Native | 135 ( 2) | 3 ( 0.6) |
| Asian American/Pacific Islander | 269 ( 4) | 23 ( 5) |
| Other/Unknown | 421 ( 6) | 20 ( 4) |
| Hispanic | 801 (12) | 94 (20) |
| Primary Cause of ESRD (p<0.01) | | |
| Diabetes mellitus | 2653 (39) | 228 (47) |
| Hypertension | 1843 (27) | 105 (22) |
| Glomerulonephritis | 872 (13) | 52 (11) |
| Other/Unknown | 1405 (21) | 96 (20) |
| Years on Dialysis | | |
| Mean (±SD) | 3.43 (±3.8) | 3.16 (±5.4) |
| Median | 2.18 | 1.99 |
| Years on Dialysis Group (p<0.001) | | |
| <0.5 | 823 (12) | 39 ( 8) |
| 0.5-1 | 909 (13) | 93 (19) |
| 1-2 | 1435 (21) | 110 (23) |
| 2+ | 3631 (53) | 239 (50) |
| Pre-dialysis body weight (in kg) | | |
| Mean (±SD) | 74.8 (±19.8) | 74.7 (±18.0) |
| Median | 71.8 | 72.2 |

Note: Percents may not add up to 100% due to rounding.

**TABLE 2:** COMPARISON OF SELECTED INTERMEDIATE OUTCOME MEASURES FOR ADULT IN-CENTER HEMODIALYSIS FFS AND HMO PATIENTS (ALL DATA ARE UNDADJUSTED)

| Intermediate Outcome Measure | FFS | HMO (unadjusted) |
|---|---|---|
| *Dialysis Adequacy* | | |
| Number and percent of patients with URR≥65% | 4628 (72%) | 339 (77%) |
| mean (±SD) URR (%) | 68.0 (±7.5) | 68.7 (±6.5) |
| median URR (%) | 69.0 | 69.2 |
| Number and percent of patients with Kt/V≥1.2 | 4930 (72%) | 352 (82%) |
| mean (±SD) Kt/V | 1.39 (±0.27) | 1.40 (±0.24) |
| median Kt/V | 1.39 | 1.40 |
| mean (±SD) dialysis session length (minutes) | 210.6 (±30.2) | 203.6 (±32.2) |
| median dialysis session length (minutes) | 210.0 | 210.0 |
| Number and percent of patients dialyzed with dialyzer KUf 20+ mL/mm Hg/hr | 3202 (50%) | 304 (66%) |
| *Anemia Management* | | |
| Number and percent of patients with: | | |
| hematocrit < 28% | 455 ( 7%) | 16 (3%) |
| hematocrit > 30% | 5374 (79%) | 403 (84%) |
| hematocrit ≥ 33% | 3845 (56%) | 297 (62%) |
| hematocrit 33%-36% | 3174 (47%) | 247 (51%) |
| mean (±SD) hematocrit (%) | 33.2 (±3.5) | 33.7 (±3.0) |
| median hematocrit (%) | 33.5 | 33.8 |
| mean (±SD) hemoglobin (gm/dL) | 10.8 (±1.2) | 11.0 (±1.1) |
| median hemoglobin (gm/dL) | 10.8 | 11.0 |
| Number and percent of patients with transferrin saturation≥20% | 4764 (70%) | 327 (68%) |
| mean (±SD) transferrin saturation (%) | 29.2 (±13.8) | 27.3 (±12.1) |
| median transferrin saturation (%) | 26.7 | 25.0 |
| Number and percent of patients with ferritin concentration ≥100 ng/mL | 5516 (81%) | 405 (84%) |
| mean (±SD) ferritin concentration (ng/mL) | 499.9 (±458) | 468.3 (±381) |
| median ferritin concentration (ng/mL) | 382.0 | 373.7 |
| Number and percent of patients with transferrin saturation <20% AND ferritin concentration < 100 ng/mL | 390 ( 6%) | 19 ( 4%) |
| mean (±SD) weekly epoetin alfa dose (units/kg/week) | 193.5 (±141.1) | 188.6 (±150.6) |
| median weekly epoetin alfa dose (units/kg/week) | 161 | 159 |
| Number and percent of patients prescribed+: | | |
| IV epoetin alfa | 5875 (86%) | 430 (89%) |
| SC epoetin alfa | 744 (11%) | 30 ( 6%) |
| IV iron | 3896 (57%) | 282 (58%) |
| PO iron | 1965 (29%) | 128 (26%) |
| *Serum Albumin* | | |
| Number and percent of patients with serum albumin≥3.5/3.2 gm/dL (BCG/BCP laboratory methods^) | 5622 (83%) | 388 (82%) |
| mean (±SD) serum albumin (gm/dL) (BCG) | 3.82 (±0.42) | 3.78 (±0.37) |
| median serum albumin (gm/dL) (BCG) | 3.85 | 3.80 |
| mean (±SD) serum albumin (gm/dL) (BCP) | 3.59 (±0.48) | 3.56 (±0.50) |
| median serum albumin (gm/dL) (BCP) | 3.60 | 3.63 |

+ prescribed at least once during the study period (October-December 1997)

^ BCG = bromcresol green laboratory method / BCP = bromcresol purple method

**TABLE 3:** MEAN (±SD) VALUES FOR INTERMEDIATE OUTCOME VARIABLES BY DURATION OF DIALYSIS (YEARS) AND HMO STATUS (ALL DATA ARE UNADJUSTED)

| Intermediate Outcome Measure | FFS | HMO |
|---|---|---|
| **URR (%)** | | |
| <0.5 yrs | 63.0 (±9.2) | 66.4 (±7.3) |
| 0.5-1 yr | 67.3 (±8.0) | 68.0 (±5.9) |
| 1-2 yrs | 68.8 (±7.1) | 68.8 (±7.9) |
| 2+ yrs | 69.0 (±6.6) | 69.2 (±5.9) |
| **Kt/V** | | |
| <0.5 yrs | 1.21 (±0.29) | 1.32 (±0.26) |
| 0.5-1 yr | 1.36 (±0.26) | 1.38 (±0.22) |
| 1-2 yrs | 1.41 (±0.26) | 1.39 (±0.26) |
| 2+ yrs | 1.42 (±0.24) | 1.42 (±0.22) |
| **Hematocrit (%)** | | |
| <0.5 yrs | 31.7 (±4.0) | 33.3 (±2.9) |
| 0.5-1 yr | 33.2 (±3.1) | 33.6 (±3.2) |
| 1-2 yrs | 33.4 (±3.0) | 33.4 (±2.8) |
| 2+ yrs | 33.5 (±3.5) | 34.0 (±3.0) |
| **Serum albumin (BCG)** | | |
| <0.5 yrs | 3.56 (±0.46) | 3.64 (±0.36) |
| 0.5-1 yr | 3.77 (±0.40) | 3.70 (±0.37) |
| 1-2 yrs | 3.86 (±0.43) | 3.80 (±0.33) |
| 2+ yrs | 3.88 (±0.38) | 3.82 (±0.38) |
| **Serum albumin (BCP)** | | |
| <0.5 yrs | 3.38 (±0.59) | 3.19 (±0.57) |
| 0.5-1 yr | 3.59 (±0.44) | 3.48 (±0.60) |
| 1-2 yrs | 3.63 (±0.48) | 3.38 (±0.49) |
| 2+ yrs | 3.63 (±0.45) | 3.65 (±0.41) |

**TABLE 4A:** FINAL LOGISTIC REGRESSION MODEL PREDICTING A MEAN URR$65%

| | < 65 years | | 65+ years | | |
|---|---|---|---|---|---|
| | **Odds Ratio (95% CI)** | **p-value** | | **Odds Ratio (95% CI)** | **p-value** |
| Duration of dialysis (years) (2+ years = referent) | | | Duration of dialysis (years) (2+ years = referent) | | |
| <0.5 | 0.19 (0.15, 0.25) | <0.001 | <0.5 | 0.17 (0.13, 0.23) | <0.001 |
| 0.5-1 | 0.49 (0.38, 0.62) | <0.001 | 0.5-1 | 0.58 (0.44, 0.75) | <0.001 |
| 1-2 | 0.80 (0.65, 0.99) | <0.05 | 1-2 | 0.97 (0.75, 1.25) | 0.7916 |
| Female Gender | 2.3 (1.9, 2.7) | <0.001 | Female Gender | 1.9 (1.6, 2.3) | <0.001 |
| African-American | 0.83 (0.70, 0.97) | <0.05 | African-American | 0.70 (0.57, 0.86) | <0.001 |
| Higher pre-dialysis weight (per kg) | 0.973 (0.969, 0.977) | p<0.001 | Higher pre-dialysis weight (per kg) | 0.981 (0.975, 0.986) | <0.001 |
| Increasing age (per year) | 1.01 (1.00, 1.02) | p<0.01 | | | |
| **Variables not retained in the model:** | | **p-value** | **Variables not retained in the model:** | | **p-value** |
| Hispanic ethnicity | | 0.3838 | HMO status | | 0.9219 |
| HMO status | | 0.3273 | Hispanic ethnicity | | 0.7687 |
| DM+ (as primary cause of ESRD) | | 0.1181 | DM+ (as primary cause of ESRD) | | 0.0774 |
| | | | Age (per year) | | 0.0705 |

**TABLE 4B:** FINAL LOGISTIC REGRESSION MODEL PREDICTING A MEAN KT/V$1.2%

| | < 65 years | | | 65+ years | |
|---|---|---|---|---|---|
| | **Odds Ratio (95% CI)** | **p-value** | | **Odds Ratio (95% CI)** | **p-value** |
| Duration of dialysis (years) (2+ yrs = referent) | | | Duration of dialysis (years) (2+ years = referent) | | |
| <0.5 | 0.14 (0.11, 0.19) | <0.001 | <0.5 | 0.16 (0.12, 0.21) | <0.001 |
| 0.5-1 | 0.41 (0.31, 0.53) | <0.001 | 0.5-1 | 0.63 (0.47, 0.83) | <0.01 |
| 1-2 | 0.61 (0.48, 0.77) | <0.001 | 1-2 | 0.86 (0.67, 1.1) | 0.2760 |
| Female Gender | 2.2 (1.8, 2.6) | <0.001 | Female Gender | 1.6 (1.3, 2.0) | <0.001 |
| African-American | 0.83 (0.70, 0.99) | <0.05 | Higher pre-dialysis weight (per kg) | 0.978 (0.973, 0.984) | <0.001 |
| Higher pre-dialysis weight (per kg) | 0.972 (0.968, 0.976) | <0.001 | | | |
| Increasing age (per year) | 1.01 (1.00, 1.02) | <0.05 | | | |

| **Variables not retained in the model:** | **p-value** | **Variables not retained in the model:** | **p-value** |
|---|---|---|---|
| HMO status | 0.7622 | DM+ | 0.5907 |
| DM+ | 0.3235 | (as primary cause of ESRD) | |
| (as primary cause of ESRD) | | HMO status | 0.5672 |
| Hispanic ethnicity | 0.2054 | Hispanic ethnicity | 0.4778 |
| | | Age (per year) | 0.3131 |
| | | Race | 0.0829 |
| | | (Caucasian/African-American only) | |

**TABLE 4C:** FINAL LOGISTIC REGRESSION MODEL PREDICTING A MEAN HEMATOCRIT <28%

| | **< 65 years** | | **65+ years** | | |
|---|---|---|---|---|---|
| | **Odds Ratio (95% CI)** | **p-value** | | **Odds Ratio (95% CI)** | **p-value** |
| Duration of dialysis (years) (2+ years = referent) | | | Duration of dialysis (years) (2+ years = referent) | | |
| <0.5 | 3.4 (2.5, 4.7) | <0.001 | <0.5 | 3.9 (2.6, 5.8) | <0.001 |
| 0.5-1 | 1.02 (0.66, 1.6) | 0.9435 | 0.5-1 | 1.4 (0.86, 2.3) | 0.1716 |
| 1-2 | 0.84 (0.57, 1.2) | 0.3566 | 1-2 | 0.89 (0.54, 1.4) | 0.6398 |
| African-American | 1.6 (1.2, 2.1) | <0.001 | African-American | 2.2 (1.6, 3.1) | <0.001 |
| Increasing age (per year) | 0.98 (0.97, 0.99) | <0.001 | | | |

| **Variables not retained in the model:** | **p-value** | **Variables not retained in the model:** | **p-value** |
|---|---|---|---|
| HMO status | 0.8894 | Pre-dialysis weight per kg | 0.9168 |
| DM+ (as primary cause of ESRD) | 0.8155 | DM+ (as primary cause of ESRD) | 0.7296 |
| Pre-dialysis weight per kg | 0.5935 | Gender | 0.2658 |
| Hispanic ethnicity | 0.4505 | Hispanic ethnicity | 0.1449 |
| Gender | 0.1335 | HMO status^ | 0.0660 |
| | | Age (per year) | 0.0549 |

^ As HMO status approached the threshold for significance, this term was forced into the model. After forcing, HMO status did not remain as a significant predictor (p=0.0861) and there was no effect on the remaining variables.

**TABLE 4D:** FINAL LOGISTIC REGRESSION MODEL PREDICTING A MEAN HEMATOCRIT $33%

| | < 65 years | | | 65+ years | |
|---|---|---|---|---|---|
| | **Odds Ratio (95% CI)** | **p-value** | | **Odds Ratio (95% CI)** | **p-value** |
| Duration of dialysis (years) (2+ years = referent) | | | Duration of dialysis (years) (2+ years = referent) | | |
| <0.5 | 0.46 (0.37, 0.57) | <0.001 | <0.5 | 0.49 (0.39, 0.62) | <0.001 |
| 0.5-1 | 0.88 (0.71, 1.1) | 0.2034 | 0.5-1 | 0.85 (0.69, 1.05) | 0.1381 |
| 1-2 | 0.97 (0.82, 1.1) | 0.7164 | 1-2 | 0.94 (0.78, 1.1) | 0.4840 |
| Female Gender | 0.69 (0.60, 0.78) | <0.001 | Female gender | 0.78 (0.67, 0.90) | <0.01 |
| Hispanic Ethnicity | 1.2 (1.0, 1.5) | <0.05 | African-American | 0.75 (0.64, 0.88) | <0.001 |
| Increasing age (per year) | 1.008 (1.002, 1.01) | <0.01 | | | |

| **Variables not retained in the model:** | **p-value** | **Variables not retained in the model:** | **p-value** |
|---|---|---|---|
| HMO status | 0.8277 | DM+ | 0.5212 |
| pre-dialysis weight per kg | 0.5289 | (as primary cause of ESRD) | |
| DM+ | 0.4413 | HMO status | 0.3926 |
| (as primary cause of ESRD) | | Age (per year) | 0.3339 |
| Race | 0.0811 | Pre-dialysis weight per kg | 0.2973 |
| (Caucasian/African-American only) | | Hispanic ethnicity | 0.0580 |

**TABLE 4E:** FINAL LOGISTIC REGRESSION MODEL PREDICTING A MEAN HEMATOCRIT 33%-36%

| | **< 65 years** | | | **65+ years** | |
|---|---|---|---|---|---|
| | **Odds Ratio (95% CI)** | **p-value** | | **Odds Ratio (95% CI)** | **p-value** |
| Duration of dialysis (years) (2+ years = referent) | | | Duration of dialysis (years) (2+ years = referent) | | |
| <0.5 | 0.61 (0.49, 0.75) | <0.001 | <0.5 | 0.50 (0.40, 0.63) | <0.001 |
| 0.5-1 | 1.00 (0.82, 1.2) | 0.9758 | 0.5-1 | 0.91 (0.74, 1.1) | 0.3629 |
| 1-2 | 1.1 (0.94, 1.3) | 0.2404 | 1-2 | 0.99 (0.83, 1.2) | 0.9473 |
| | | | African-American | 0.80 (0.68, 0.93) | <0.01 |
| **Variables not retained in the model:** | | **p-value** | **Variables not retained in the model:** | | **p-value** |
| pre-dialysis weight per kg | | 0.9469 | DM+ (as primary cause of ESRD) | | 0.9578 |
| HMO status | | 0.8615 | Pre-dialysis weight per kg | | 0.8622 |
| DM+ (as primary cause of ESRD) | | 0.4105 | HMO status | | 0.7300 |
| Gender | | 0.2346 | Age (per year) | | 0.2940 |
| Race (Caucasian/African-American only) | | 0.1772 | Hispanic ethnicity | | 0.1516 |
| | | | Gender | | 0.0832 |

| | |
|---|---|
| Age (per year) | 0.1562 |
| Hispanic ethnicity | 0.0970 |

**TABLE 4F:** FINAL LOGISTIC REGRESSION MODEL PREDICTING A MEAN SERUM ALBUMIN $ 3.5/3.2GM/DL (BCG/BCP, RESPECTIVELY)

| | **< 65 years** | | | **65+ years** | |
|---|---|---|---|---|---|
| | **Odds Ratio (95% CI)** | **p-value** | | **Odds Ratio (95% CI)** | **p-value** |
| Duration of dialysis (years) (2+ years = referent) | | | Duration of dialysis (years) (2+ years = referent) | | |
| <0.5 | 0.22 (0.17, 0.28) | <0.001 | <0.5 | 0.34 (0.26, 0.43) | <0.001 |
| 0.5-1 | 0.68 (0.51, 0.91) | <0.01 | 0.5-1 | 0.67 (0.52, 0.86) | <0.01 |
| 1-2 | 0.80 (0.62, 1.03) | 0.0826 | 1-2 | 1.2 (0.95, 1.6) | 0.1244 |
| Female gender | 0.77 (0.64, 0.93) | <0.01 | | | |
| DM+ | 0.48 (0.39, 0.58) | <0.001 | DM+ | 0.63 (0.52, 0.76) | <0.001 |

| | | |
|---|---|---|
| (as primary cause of ESRD) | | |
| Increasing pre-dialysis body weight (per kg) | 1.01 (1.00, 1.02) | <0.001 |

| **Variables not retained in the model:** | **p-value** |
|---|---|
| HMO status | 0.9286 |
| Race (Caucasian/African-American only) | 0.2232 |
| Hispanic ethnicity | 0.0973 |
| Age (per year) | 0.0875 |

| | | |
|---|---|---|
| (as primary cause of ESRD) | | |
| Increasing pre-dialysis body weight (per kg) | 1.014 (1.008, 1.02) | <0.001 |

| **Variables not retained in the model:** | **p-value** |
|---|---|
| Race (Caucasian/African-American only) | 0.8424 |
| HMO status | 0.7331 |
| Gender | 0.4904 |
| Age (per year) | 0.0594 |
| Hispanic ethnicity | 0.0568 |